

# NRC INSPECTION MANUAL

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## PART 9900: TECHNICAL GUIDANCE

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AMERICAN NATIONAL STANDARDS INSTITUTE  
ANSI N18.7, SECTION 5.2.7, DESIGN AND  
CONSTRUCTION TYPE ACTIVITIES CONDUCTED DURING THE OPERATIONS  
PHASE  
(MAINTENANCE AND MODIFICATIONS)

### A. PURPOSE

To provide the NRC position concerning the application of ANSI N18.7 technical and QA programmatic/administrative requirements for design and construction type activities conducted during the operations phase.

### B. DISCUSSION

10 CFR 50.34.b.(6) requires licensees to describe in the Final Safety Analysis Report (FSAR) information relating to the managerial and administrative controls to be used to assure safe operation. In complying with this requirement as it relates to technical and administrative controls to be used for maintenance and modification activities at an operating facility, licensees generally document in the FSAR a commitment to the provisions of Regulatory Guide 1.33. Regulatory Guide 1.33, Revision 1, dated January 1977, Quality Assurance Program Requirements (Operation), endorses ANSI N18.7 - 1976, Administrative Controls and Quality Assurance for the Operations Phase of Nuclear Power Plants.

Experience has shown that certain ANSI N18.7 - 1976 requirements associated with maintenance and modification activities at an operating facility require clarification. Therefore, the Offices of Nuclear Reactor Regulation, Inspection and Enforcement, and Standards Development, developed the following NRC position regarding the specific requirements which are applicable for design and construction type activities at operating power reactor facilities committed to ANSI N18.7.

1. Section 5.2.7 of ANSI N18.7 "Maintenance and Modifications" addresses those technical requirements to be applied during maintenance and modification. The first sentence of this Section states that "maintenance or modifications which may affect functioning of safety-related structures, systems or components shall be performed in a manner to ensure quality

at least equivalent to that specified in original design bases and requirements, material specifications and inspection requirements."

NRC interprets this statement to mean that the technical requirements associated with maintenance and modifications are to be equivalent to or exceed the original requirements (e.g., code requirements, material properties, design margins, and manufacturing processes).

2. The fourth paragraph of Section 5.2.7, "Maintenance and Modifications," and other sections in 18.7 address QA programmatic/administrative requirements associated with maintenance and modifications and identify QA standards which are to be applied to those activities occurring during the operational phase that are comparable in nature and extent to related activities occurring during initial plant construction.

NRC interprets this to mean that the QA programmatic/administrative requirements contained in ANSI N18.7, including referenced standards, shall apply to maintenance and modification activities, even though such QA requirements were not in effect during original construction.

END